# Mathematics

## HCCS campus (West Loop)

Math 0310: Basic Concepts for Business Math and Statistics

CRN 19958/ Fall/ 2018

C 247| 8:30 pm – 9:50pm | T, Th

3 hour lecture course / 48 hours per semester/ 16 weeks

Textbook: Introductory and Intermediate Algebra for Houston Community College; Margaret Lial; Pearson Custom Publishing: 2019

ISBN 13: 978-0-13-533201-6

**Instructor**: Mohammad Abbasi
**Email**: mohammad.abbasi@hccs.edu

**Office Hours:** I will be available after class and before class by appointment
Please send me and an email for appointment

**Class Cancellation:** The department secretary will call the students in case of cancellation

**Course Description**

Basic Concepts for Business Math and Statistics: Topics include real numbers, order of operations, proportions and percent, percent of increase/decrease, simple interest, introduction to probability and statistics, integer exponents, polynomials, linear equations and inequalities in one variable, linear equations and inequalities in two variables, systems of linear equations, matrices, linear functions and an introduction to other which may include exponential, quadratic functions, quadratic equations, and set operations. A departmental final examination must be passed with a score of 60% or more in order to pass the course.

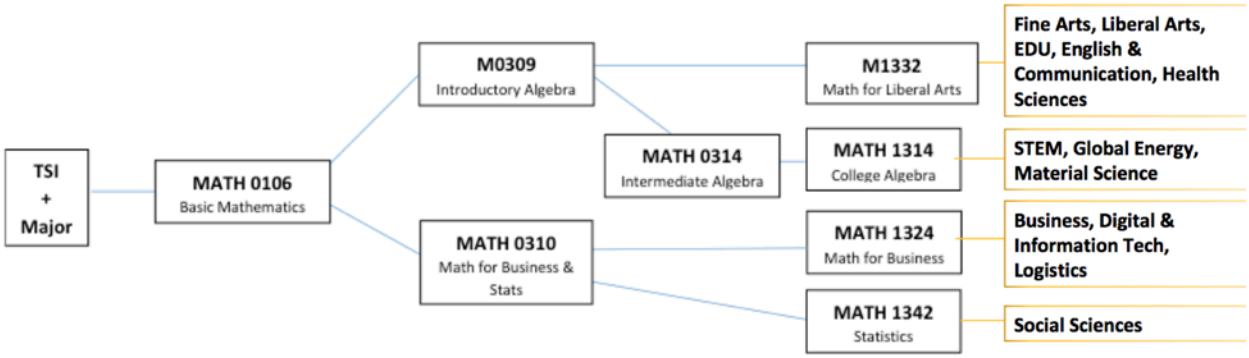
**Prerequisites**

TSIA ABE level 5 or 6; TSIA Math Score 336 – 349 with Intermediate Algebra Diagnostic Score 0 – 3; Math 0106: Pass with "C" or better

**Co-requisite:** MATH 0310 is a co-requisite to MATH 1324 and MATH 1342. Since MATH 0310 is co-requisite with MATH 1324 and MATH 1342, withdrawing from MATH 0310 will necessitate withdrawal from MATH 1324 and/or MATH 1342 as well.

MATH 0310 is a co-requisite to with MATH 1324 and MATH 1342. MATH 0309 is a prerequisite to MATH 0314 and MATH 0314 is a prerequisite to MATH 1314. Co-requisite courses may be taken during the same semester. If a course has a prerequisite, the prerequisite must be successfully completed (C or better) before taking the next course.

**HCC MATH PATHWAYS**



**Course Goal**
This course is intended for students who have either never been exposed to algebra or who have been away from the subject for quite some time. In particular, this course is intended to prepare students for the study of Math 1324 or Math 1342. Be sure that you are enrolled in the correct math class. If you are a STEM Major or have a Liberal Arts major, it is likely that you need MATH 0309 instead of MATH 0310. Notify your teacher and/or advisor as soon as possible.

**Course Student Learning Outcomes (SLO)**
1. Identify and apply properties of real numbers and perform accurate arithmetic operations with numbers in various formats.
2. Demonstrate the ability to manipulate/simplify algebraic expressions, & classify/solve algebraic equations with appropriate techniques.
3. Demonstrate the use of elementary graphing techniques and perform matrix operations.
4. Find the probability of a simple event, and understand the counting techniques.
5. Recognize, read, interpret statistical graphs and find the central of tendency of data.
6. Solve problems including ratios, rates, proportion, and percent.
7. Recognize, interpret, and solve the linear, quadratic, exponential models of equations.

**Learning objectives**
Students will:
1. add, subtract, multiply and divide real numbers and manipulate certain expressions
2. use the rules for integer exponents
3. simplify algebraic expressions
4. solve problems using equations and inequalities
5. plot ordered pairs and graph linear equations
6. solve systems of linear equations
7. operations on matrices and determinant
8. graph linear inequalities
9. find the rate of change of a line & write its equation
10. use rules for exponents and operations on polynomials
11. use function notation and evaluate functions
12. model situations with linear, quadratic, or exponential functions
13. find the probability of a simple event, find the central of tendency of data
14. read and interpret bar graphs, circle graphs, line graphs, pictorial graphs

**Core Objectives**

Given the rapid evolution of necessary knowledge and skills and the need to take into account global, national, state, and local cultures, the core curriculum must ensure that students will develop the essential knowledge and skills they need to be successful in college, in a career, in their communities, and in life. Through the Texas Core Curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world, develop principles of personal and social responsibility for living in a diverse world, and advance intellectual and practical skills that are essential for all learning.

**Critical Thinking Skills**: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.

**Communication Skills:** to include effective development, interpretation and expression of ideas through written, oral and visual communication.

**Empirical and Quantitative Skills:** to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

# CALENDAR

**INTRO. TO REAL NUMBERS & ALGEBRAIC EXPRESSIONS (Review Mode) (Chapter 1)**

**Aug 28**

1.1 Introduction to Algebra
1.2 The Real Numbers and the Number Line

Aug 30
1.3 Addition and Subtraction of Real Numbers
1.4 Multiplication and Division of Real Numbers
1.5 Properties of Real Numbers

Sep 4
1.6 Simplifying Expressions; Order of Operations

**PROBABILITY AND STATISTICS (Chapter 2)**

2.1 Sets and Set operations
2.2 The counting techniques

Sep 6
2.3 Introduction to Probability
2.4 Organizing data

Sep 11
2.5 Circle Graphs and Pictographs
2.6 Bar Graphs and Broken-Line Graph

Sep 13
2.7 Statistical Measures (Mean, Mode, Median)

**LINEAR EQUATIONS AND INEQUALITIES IN ONE VARIABLE (Chapter 3)**

3.1 Solve Linear Equations by Addition Principle, Multiplication Principles, and Both

Sep 18
3.2 Translating Sentences into equations
3.3 Applications of Linear Equations

Sep 20
3.4 Linear Inequalities

Sep 25
3.5 Compound and Absolute Value Inequalities

Sep 27 Test one Revie

**Oct 2 Test One, Paper and pencil test**

**INTRODUCTION TO EQUATIONS AND PERCENT (Chapter 4)**

**Oct 4**

4.1 Proportions
4.2 Percent and basic percent equations

Oct 9
4.3 Percent of increase and percent of decrease
4.4 Markup, Discount, Sales

Oct 11
4.5 Simple Interest

**GRAPHS OF LINEAR EQUATIONS AND INEQUALITIES (Chapter 5)**

**Oct 16**

5.1 The Rectangular Coordinate System
5.2 Graphs of Linear Equations

Oct 18
5.3 The slope of a Line and x- and y-intercepts
5.4 Finding Equations of Lines

Oct 23
5.5 Inequalities in Two Variables

Oct 25 Midterm Exam Review

Oct 30 Test # 2 Midterm Exam

**SYSTEMS OF LINEAR EQUATIONS IN TWO VARIABLES (Chapter 6)**

**Nov 1**
6.1 Solving Systems of Linear Equations by Graphing
6.2 Solving Systems of Linear Equations by Substitution Method

Nov 2 Last day for Administrative Withdrawn

Nov 6
6.3 Solving Systems of Linear Equations by Addition Method

Nov 8
6.4 Introduction to Matrices and Simple Matrix operations

**POLYNOMIALS (Chapter 7)** **(3 hours)**

1.1 Introduction to polynomials and integer exponents

Nov 13
1.2 Addition and Subtraction of polynomials
1.3 Multiplication of polynomials and Division of Monomials

**INTRODUCTION TO FUNCTIONS AND MODELS (Chapter 8)**

**Nov 15**

8.1 Functions (definitions of relations and functions, function notation, and evaluating functions)
8.2 Linear functions and models

Nov 20
8.3 Basic Quadratic functions and models
8.4 Basic Exponential functions and models

**Nov 22- 25 Thanks Giving Break**

Nov 27 Test Three Review

Nov 29 Test # 3 (paper and pencil Tests)

Dec4, and 6 Final Exam Review

***Dec 11 Comprehensive Final Exam (Multiple choice) 8:00 pm – 10:00 pm***

***Assessment/Make-up and Grading***

***You benefit for attending class regularly. You earn rewards as follows:***
***Perfect attendance (0 absent and 0 tardy) + Final Exam Review = 5. The point will add to the final exam grade.***
***The students receive 10 points as extra credit assign to each test with perfect attendance between two tests and doing test review.***
***Any student who arrives 15 minutes after the class has begun or leaves before the class is dismissed without any prior approval of the instructor is considered absent.***

***Exam***

***There will be three major Test, Homework, quizzes, and comprehensive departmental***

***There will be no makeup***

**Calculator Policy**:

As with all developmental mathematics courses at HCC, **the use of a calculator during any exam, including the final exam, is prohibited** and will be considered cheating (see academic honesty section below).

## Final Exam Policy in Developmental Mathematics:

The following policy was adopted by Houston Community College regarding the system-wide Final Examinations in developmental mathematics courses:

a. Students who score less than 60% on the Final Examination or who have an overall course average less than 70% will be awarded a grade of "IP" or "F." The "IP" grade will be awarded to those students who took Math 0314 for the 1st time. The "F" grade will be awarded to those students who are repeating Math 0314.

b. Students who score 60% or higher on the Final Examination and whose overall course average is equal to or greater than 70%, will have their grades averaged and awarded a grade based upon the standard 10 point scale.

## Grading policy:

| | |
|---|---|
| **Exam 1** | **20%** |
| **Midterm (Exam 2)** | **20%** |
| **Exam 3** | **20%** |
| **Homework/lab** | **15%** |
| **Final Exam** | **25%** |

## HCC Grading Scale:

A = 100 – 90.....4 points per semester hour
B = 89 – 80.....3 points per semester hour
C = 79 – 70.....2 points per semester hour
69 and below = F or IP.....0 points per semester hour
IP (In Progress) .....0 points per semester hour

IP (In Progress) is given only in certain developmental courses. The student must re-enroll to receive credit. COM (Completed) is given in non-credit and continuing education courses. To compute grade point average (GPA), divide the total grade points by the total number of semester hours attempted. The grades "IP," "COM" and "I" do not affect GPA.

**Note**: The grade of "FX" is given when a student fails due to lack of attendance. A grade of "W" may be given on or before the official withdrawal date but not at the time of final grade submission.

MyMathLab is an interactive website where you can:

- Self-test to improve your math skills.
- Study more efficiently. Create personalized study plans with exercises that match your book.
- Get help when you need it. Includes multimedia learning aids like videos and animations.
- Talk to a live tutor via a toll free number.

**Before You Begin:**

To register for MyMathLab you will need:

- ☑ **A "Course ID" provided by your instructor Course ID** abbasi42838
- ☑ **A My Math Lab student access code** (packaged with your new text or available for purchase at with a major credit card at www.mymathlab.com
- ☑ **Your school's zip code:** __77081_____
- ☑ A valid email address

**Student registration:**

- Go to http://www.coursecompass.com and click the **Register** button for Students.
- Review the **Before You Start** information. If you have everything you need to register, click **Next**.
- Enter your **Course ID** as provided by your instructor and click **Next.**
- If you have your access code, click **Register** (if you need to buy access online, click that option and follow those prompts to register).
- Read the Privacy Policy and License Agreement and click "**I Accept."**
- Select "**No, I am a New User**" and enter in your **Access Code** in the fields provided (type one "word" per box).
- Enter your School's **Zip Code,** select your Country, and click **Next.**
- Enter your **Name** and **Email** and select **Your School.**
- Create your **Login** Name and **Password**, answer the **Security** Question, and click **Next**.

If successful, you see a **Confirmation & Summary** screen; write down your confirmed login/password in case you forget it! A confirmation email will also be sent to you - if you use a Spam email blocker, be sure to allow emails from Pearsoned.com.

**Logging In:**

- Go to http://www.coursecompass.com and click the **Log In** button for Students.
- Enter the **login name and password** you just created (write it down in case you forget it!) and click **Log In**.

- You will see the name of your **course** listed on the left; click that link to access your course and Announcements.

The first time you enter the site from your personal computer ***and*** anytime you use a new computer, click on the software **Installation Wizard** on the Announcements page. This wizard will walk you through installing the software you will need to use the MyMathLab resources. Note: Software may already be installed on the school's lab computers; check with your lab administrator.

**Need Help?**

- Visit **http://www.mymathlab.com/contactus.html** for student "getting started" information, to fill out an online request form, or to use Pearson's live "Chat" feature to talk with a member of the support team.
- Additional help can be found on your course Announcements page by clicking **Tip Sheets (?),** as well as in any Chapter Contents area by clicking "**MyMathLab Student Help"** at the top.

**MyMathLab includes access to the AW Tutor Center!**
Visit **www.aw-bc.com/tutorcenter** for available tutoring services.
Call for help toll-free help at 1-888-777-0463 ▪

## Use of Camera and/or Recording Devices

As a student active in the learning community of this course, it is your responsibility to be respectful of the learning atmosphere in your classroom. To show respect of your fellow students and instructor, you will turn off your phone and other electronic devices, and will not use these devices in the classroom unless you receive permission from the instructor.

Use of recording devices, including camera phones and tape recorders, is prohibited in classrooms, laboratories, faculty offices, and other locations where instruction, tutoring, or testing occurs. Students with disabilities who need to use a recording device as a reasonable accommodation should contact the Office for Students with Disabilities for information regarding reasonable accommodations

## Personal Communication Device Policy:

All personal communication devices (any device with communication capabilities including but not limited to cell phones, blackberries, pagers, cameras, palmtop computers, lap tops, PDA's, radios, headsets, portable fax machines, recorders, organizers, databanks, and electronic dictionaries or translators) must be muted or turned off during class. Such activity during class time is deemed to be disruptive to the academic process. Personal communication devices are to not be on the student desk during examinations. Usage of such devices during exams is expressly prohibited during examinations and will be considered cheating (see academic honesty section below).

## Calculator Policy:

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b. Students who score 60% or higher on the Final Examination and whose overall course average is equal to or greater than 70%, will have their grades averaged and awarded a grade based upon the standard 10 point scale.

## HCC Policy Statement - Students with disabilities

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to http://www.hccs.edu/support-services/disability-services/

***Ability Services Contact Information***

| | | |
|---|---|---|
| Central College | 713-718-6164 | |
| Coleman College | 713-718-7376 | |
| Northeast College | 713-718-8322 | |
| Northwest College | 713-718-5422 | 713-718-5408 |
| Southeast College | 713-718-7144 | |
| Southwest College | 713-718-5910 | |
| Adaptive Equipment/Assistive Technology | 713-718-6629 | 713-718-5604 |
| Interpreting and CART services | 713-718-6333 | |

## Basic Needs Security Statement

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable us to provide any resources that HCC may possess.

## Campus Carry statement:

At HCC the safety of our students, staff, and faculty is our first priority. As of August 1, 2017, Houston Community College is subject to the Campus Carry Law (SB11 2015). For more information, visit the HCC Campus Carry web page at http://www.hccs.edu/departments/police/campus-carry/

**Resource Materials**: In addition, this course has an associated CANVAS Model course. Course materials are available within the CANVAS Course Management System. Any student enrolled in a developmental math course at HCC has access to the Learning Resource Center (LRC) where they may get additional help in understanding the theory or in improving their skills. The LRC is staffed with mathematics faculty and/or student assistants, and offers tutorial help, videos and computer-assisted drills.

**HCC Policy Statement: Sexual Misconduct**

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status-in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:
David Cross
Director EEO/Compliance
Office of Institutional Equity & Diversity
3100 Main
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu

**Student Course Reinstatement Policy:**

Students have a responsibility to arrange payment for their classes when they register, either through cash, credit card, financial aid, or the installment plan. Faculty members have a responsibility to check their class rolls regularly, especially during the early weeks of a term, and reconcile the official class roll to ensure that no one is attending class whose name does not appear on it. Students who are dropped from their courses for nonpayment of tuition and fees who request reinstatement after the official date of record (OE Date) can be reinstated by making payment in full and paying an additional \$75 per course reinstatement fee. A student requesting reinstatement should present the registrar with a completed Enrollment Authorization Form with the signature of the instructor, department chair, or dean who should verify that the student has been attending class regularly. Students who are reinstated are responsible for all course policies and procedures, including attendance requirements.

## Resources:

The HCC Tutoring Centers provide academic support to our diverse student population by creating an open atmosphere of learning for all students enrolled at HCC. Using a variety of tutoring techniques, we assist students across academic disciplines, addressing their individual needs in a constructive, safe, and welcoming environment. Our emphasis is on maximizing academic potential while promoting student success and retention. We are committed to helping students achieve their educational, personal, and career goals by empowering them to become confident, independent, lifelong learners.

Tutoring for individual subjects is offered at specific times throughout the week on various campuses. There is no need to make an appointment. If you need a tutor, please refer to our website:
**http://www.hccs.edu/findatutor** for times and locations. For more information about tutoring at HCC, please go to http://www.hccs.edu/tutoring.

Additional help is also available through Student Support Services. Students can get free assistance, 24 hours a day, 7 days a week, in Math, English and other subjects, at https://hccs.upswing.io/. Typically, an HCC tutor or faculty answers posted questions within 24 hours (usually under 6 hours).

In addition, you can find several online math resources through an internet search. You may also find information on the Learning Web site accessible through your specific HCCS campus website.

## EGLS$_3$ -- Evaluation for Greater Learning Student Survey System

At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your professors and division chairs for continual improvement of instruction. Look for the survey as part of the Houston Community College Student System online near the end of the term. Visit www.hccs.edu/EGLS3 for more information.

## Administration contact information

**College - Level Math Courses**

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|---|---|---|---|---|
| Chair of Math | Susan Fife | SW Campus | 713-718-7241 | Stafford, Scarcella, N108 |
| - Admin. Assistant | Tiffany Pham | SW Campus | 713-718-7770 | Stafford, Scarcella, N108 |
| - Admin. Assistant | Christopher Cochran | SW Campus | 713-718-2477 | Stafford, Scarcella, N108 |
| Math Assoc. Chair | Jaime Hernandez | CE Campus | 713-718-7772 | San Jacinto Building, Rm 369 |
| Math Assoc. Chair | Ernest Lowery | NW Campus | 713-718-5512 | Katy Campus Building, Rm 112 |
| Math Assoc. Chair | Mahmoud Basharat | NE Campus | 713-718-2438 | Codwell Hall Rm 105 |

**Developmental Math Courses**

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|---|---|---|---|---|
| Chair of Dev. Math | Marisol Montemayor | SE Campus | 713-718-7153 | Felix Morales Building, Rm 124 |
| - Secretary | Carmen Vasquez | SE Campus | 713-718-7056 | Felix Morales Building, Rm 124 |
| Dev. Math Assoc. Chair | Hien Nguyen | SE Campus | 713-718-2440 | Felix Morales Building, Rm 124 |
| Dev. Math Assoc. Chair | Jack Hatton | NE Campus | 713-718-2434 | Northline Building, Room 321 |

For issues related to your class, please first contact your instructor.
If you need to contact departmental administration, then contact the appropriate Associate Chair.
If further administrative contact is necessary, then contact the appropriate Department Chair.